

ABSTRACT OF THE DISCLOSURE

Resists can be removed while metal contamination of wafers, etc. and generation of particles, and growth of oxide films are suppressed.

5 An ozone gas feed system 40 for feeding ozone gas 2 into a processing vessel 10 holding wafers W, and a steam feed means 30 for feeding steam 1 into the processing vessel 10 are provided. An on-off valve 49 inserted in the ozone gas feed pipe 42, an on-off valve 36 inserted in the steam feed pipe 34 and a switch 48 and an on-off valve 49 of ozone gas generator 41 are connected to CPU 100 which is control means and are controlled by the CPU 100. Ozone gas 2 is fed into the processing vessel 10 to pressurize the atmosphere surrounding the wafers W, and then steam 1 is fed into the processing vessel 10 while ozone gas 2 is fed into the processing vessel 10, whereby a resist of the wafers W can be removed with the steam 1 and the ozone 2 while metal corrosion, etc. can be prevented.